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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/265,070

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YOICHI YAMAGISHI

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09/29/2005

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EXAMINER

AGGARWAL, YOGESH K

ART UNIT

PAPER NUMBER

2615

DATE MAILED: 09/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/265,070

Applicant(s)

YAMAGISHI ET AL.

Examiner

Yogesh K. Aggarwal

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07/07/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21, 26, 31-35, 40, 45-49, 54 and 59-71 is/are pending in the application.
- 4a) Of the above claim(s) 1-16 and 60-68 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-21, 26, 31-35, 40, 45-49, 54, 59 and 69-71 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/07/2005 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 17, 31 and 45 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 17-21, 26, 31-35, 40, 45-49, and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katayama et al, U.S. Patent 6,389, 179, as disclosed in the information Disclosure Statement, in view of Tenmyo (JP Patent # 01096639A).

[Claim 17]

Katayama et al teaches an image processing apparatus (col. 1, lines 7-8) having a function of storing a plurality of sensed still images in a storage means (col. 1, lines 11-12, and

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col. 9, lines 21-24), comprising image sensing means (image sensing unit 110) comprising an image sensing lens 101 which can change an optical system condition (col. 9, lines 53-54, and col. 11, lines 14-17),

storage means (image memory 130) for storing a plurality of images sensed by said image sensing means (image sensing unit 110) in association with each other (col. 9, lines 21-29, and col. 1, lines 11-12), and

control means (signal processing unit 190) for controlling to inhibit the optical system condition of said image sensing lens from changing when the release button is depressed to its first stroke position (col. 12, lines 24-43).

Katayama et al further teaches that when the release button is then depressed to its second control position, image data is sensed and stored to memory (col. 12, line 44-col. 13, line 4).

Katayama teaches that when the focal length for images remains the same, captured images are contiguous with one another and can be coordinate-transformed using only vertical and horizontal translation amounts (col. 43, lines 52-59).

Katayama fails to teach that the optical system condition change instruction means for outputting a signal indicating that the optical system of said image sensing lens is operated by a user; selecting unit configured to make the user selects whether or not to continue an image sensing operation when said optical system condition change instruction means outputs the signal to change the optical system condition; a determining unit configured to determine whether a first of the plurality of consecutive images is sensed nor does Katayama teach a control unit configured to complete associating operation of the plurality of consecutive images which have been sensed before reception of the instruction for changing the optical system

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condition of said image sensing lens from said optical system condition change instruction unit when the user selects to finish the image sensing operation based on a result from said selecting unit , and configured to finish associating operation of images after a plurality of images, which have been sensed, are associated with each other upon reception of the instruction for changing the optical system condition of said image sensing lens from said optical system change instruction means after a first one of the plurality of images to be stored in said storage means in association with each other is sensed and stored, and for controlling to stop changing of the optical system condition when the user selects to continue the image sensing operation based on a result from said selecting unit.

However Tenmyo teaches in figure 2, that if a panoramic mode is selected by the user, a selection means for selecting multiple pictures for photographing is given after first photographing and completing a first automatic focus controlling action and locking the zoom signal (Abstract and Constitution). The user has to press the shutter to continue the image sensing (See figure 2) [and is therefore read as selecting unit configured to make the user selects whether or not to continue an image sensing operation when said optical system condition change instruction means outputs the signal to change the optical system condition]. If a shutter release is pressed, and the total number of pictures taken are not done then the remaining pictures are taken with the same value of zoom that has already been locked until all the picture taking is done (figure 2) [reads on a determining unit configured to determine whether a first of the plurality of consecutive images is sensed and configured to finish associating operation of images after a plurality of images, which have been sensed, are associated with each other upon reception of the instruction for changing the optical system condition of said image sensing lens

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from said optical system change instruction means after a first one of the plurality of images to be stored in said storage means in association with each other is sensed and stored, and for controlling to stop changing of the optical system condition when the user selects to continue the image sensing operation based on a result from said selecting unit].

Therefore taking the combined teachings of Katayama and Tenmyo, it would be obvious to one skilled in the art to have been motivated to have optical system condition change instruction means for outputting a signal indicating that the optical system of said image sensing lens is operated by a user; selecting unit configured to make the user selects whether or not to continue an image sensing operation when said optical system condition change instruction means outputs the signal to change the optical system condition; a determining unit configured to determine whether a first of the plurality of consecutive images is sensed nor does Katayama teach and configured to finish associating operation of images after a plurality of images, which have been sensed, are associated with each other upon reception of the instruction for changing the optical system condition of said image sensing lens from said optical system change instruction means after a first one of the plurality of images to be stored in said storage means in association with each other is sensed and stored, and for controlling to stop changing of the optical system condition when the user selects to continue the image sensing operation based on a result from said selecting unit in order to prevent magnification for photographing a panoramic object from varying every photographing by locking the zoom setting position of a lens.

Katayama in view of Tenmyo fails to teach a control unit configured to complete associating operation of the plurality of consecutive images which have been sensed before reception of the instruction for changing the optical system condition of said image sensing lens

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from said optical system condition change instruction unit when the user selects to finish the image sensing operation based on a result from said selecting unit. However Official Notice is taken of the fact that it is notoriously well known in the art to lock in the focal length when capturing images for a panoramic image to obtain images that can be synthesized by mere translation. Therefore taking the combined teachings of Katayama, Tenmyo and Official Notice, it would have been obvious to one skilled in the art to have locked in the focal length when capturing images for a panoramic image in order to obtain images that can be synthesized by mere translation.

[Claim 18]

Tenmyo teaches that the optical system condition is a focal length of said image sensing lens (Abstract).

[Claim 19]

Katayama et al teaches that the association of the plurality of images is obtaining of a panoramic image by synthesizing the plurality of images (col. 1, lines 10-12).

[Claim 20]

Katayama et al teaches that the plurality of images are images sensed by performing pixel shift, and associating the plurality of images is obtaining a high- resolution image by synthesizing the plurality of images sensed by performing the pixel shift (Figs. 6 and 15, col. 10, lines 34-48, col. 19, line 10-col. 21, line 3).

[Claim 21]

Katayama in view of Tenmyo fails to teach to start sensing a plurality of new images to be stored in association with each other after the associating operation of images is finished. Official

shift

all
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Notice is taken of the fact that it is notoriously well known to one skilled in the art to start sensing a plurality of new images to be stored in association with each other after the associating operation of images is finished. One of ordinary skill would have been motivated to make such a modification to abandon a set of out-of-focus images to capture a set of in-focus images for use in synthesizing a panoramic image.

[Claim 26]

Katayama et al teaches control means (signal processing unit 190) for controlling to set the optical system condition of said image sensing lens at an initial value before sensing of a first one of the plurality of images to be stored in said storage means in association with each other is started (col. 11, lines 54-58, 67-col. 12, lines 8, 19-23).

[Claims 31 and 45]

These are method and storage medium claims corresponding to claim 17. Therefore they have been analyzed and rejected based upon claim 17.

[Claim 32]

Katayama et al teaches that the optical system condition is a focal length of said image sensing lens (col. 11, line 54-col. 12, lines 8, 19-26).

[Claim 33]

Katayama et al teaches that the association of the plurality of images is obtaining of a panoramic image by synthesizing the plurality of images (col. 1, lines 10-12).

[Claim 34]

Katayama et al teaches that the plurality of images are images sensed by performing pixel shift, and associating the plurality of images is obtaining a high-resolution image by synthesizing the

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plurality of images sensed by performing the pixel shift (Figs. 6 and 15, col. 10, lines 34-48; col. 19, line 10-col. 21, line 3).

[Claim 35]

See Examiner notes regarding claim 21.

[Claim 40]

Katayama et al teaches control means (signal processing unit 190) that perform the step of controlling to set the optical system condition of said image sensing lens at an initial value before sensing of a first one of the plurality of images to be stored in said storage means in association with each other is started (col. 11, lines 54-58, 67-col. 12, lines 8, 19-23).

[Claim 46]

Katayama et al teaches that the optical system condition is a focal length of said image sensing lens (col. 11, line 54-col. 12, lines 8, 19-26).

[Claim 47]

Katayama et al teaches that the association of the plurality of images is obtaining of a panoramic image by synthesizing the plurality of images (col. 1, lines 10-12).

[Claim 48]

Katayama et al teaches that the plurality of images are images sensed by performing pixel shift, and associating the plurality of images is obtaining a high-resolution image by synthesizing the plurality of images sensed by performing the pixel shift (Figs. 6 and 15, col. 10, lines 34-48, col. 19, line 10-col. 21, line 3).

[Claim 49]

See Examiner notes regarding claim 21.

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[Claim 54]

Katayama et al teaches a control program comprising the steps of controlling to set the optical system condition of said image sensing lens at an initial value before sensing of a first one of the plurality of images to be stored in said storage means in association with each other is started (col. 11, lines 54-58, 67-col. 12, lines 8, 19-23).

5. Claim 59 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katayama et al, U.S. Patent 6,389, 179, in view Tenmyo (JP Patent # 01096639A), and further in view of Arai et al, U.S. Patent 5,600,371, disclosed in the Information Disclosure Statement.

[Claim 59]

Katayama in view of Tenmyo teach the apparatus according to the limitations of claim 17. See above. Katayama in view of Tenmyo do not teach that the change in the optical system condition is the attachment/detachment of the optical system. Arai et al teaches that when the lens is detached from the camera, the driving means of the lens is stopped, thereby prevented from outputting a signal to change the optical system condition (col. 11, lines 56-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to generate an alert when the image-sensing lens has been detached from the lens. One of ordinary skill would have been motivated to make such a modification to cut off power from the system when image sensing can no longer be performed properly to conserve power.

6. Claims 69-71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katayama et al, U.S. Patent 6,389, 179, in view of Tenmyo (JP Patent # 01096639A).

[Claim 69]

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Katayama in view of Tenmyo teach the apparatus of claim 17. Katayama in view of Tenmyo do not teach an alerting means for alerting upon reception of the instruction for changing the optical system condition of said image sensing lens from said optical system condition change instruction means. The examiner takes Official Notice that it is well-known in the art to let the user know which set of images will be grouped together for a panoramic image. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to alert the user upon reception of the instruction for changing the optical system condition of the image-sensing lens. One of ordinary skill would have been motivated to make such a modification to alert the user that previous images will be discarded and the next images to be captured shall constitute the panoramic image.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yogesh K. Aggarwal whose telephone number is (571) 272-7360. The examiner can normally be reached on M-F 9:00AM-5:30PM.


7. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571)-272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YKA

September 26, 2005



DAVID L. OMETZ
SUPERVISORY PATENT
EXAMINER